

التدريب البليومتري الأرضي والمائي وأثره على الرشاقة لدى الذكور 14 سنة

Land and Aquatics Plyometric Training Effect On 14 Years Boys' Agility

(A Comparative Study)

1434 _ !2013

قرار لجنـــــة المناقشـــــة

التدريب البليومتري الأرضي والمائي وأثره على الرشاقة لدى الذكور 14 سنة (دراسة مقارنة)

Land and Aquatics Plyometric Training Effect On 14 Years Boys' Agility (A Comparative Study)

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قدمت هذه الرسالة استكمالاً لمتطلبات الحصول على درجة الماجستير في التربية الرياضية

في تخصص علوم الحركة في جامعة اليرموك، إربد، الأردن

وافـــق عليـهـــا

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أستاذ علم التدريب الرياضي، قسم علوم الرياضة، كلية التربية الرياضية، جامعة اليرموك

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أستاذ التدريب الرياضي – السباحة، قسم التربية البدنية، كلية التربية الرياضية، جامعة اليرموك

تاريخ مناقشة الرسالة

9 / 8 / 2013م

ƀƐƣǀǰŨƐ

إلى من كلل العرق جبينه. . .وشققت الأيام كفيه إلى من غرس في نفسى الأمل وحب العمل. . .إلى رمز الوفاء . . . إلى

رمز العطاء

ǇƥDžƳ Ĭʒ ŶƐ üƑƯƈ ĬǁƑƩǁƐ ĬƓƈ

إلى من علمتني الحب . . .إلى من قدمت عمرها في التربية والعمل دون كلل أو ملل. . . إلى من أحاطتني بدعائها ودعمها

ليل ونهار . . . إلى من سهرت الليالي حتى أنام. . . إلى رمز الحنان ومنبع الأمل. . . إلى القلب الطاهر الرقيق

ƑǀƥDžƳ Ĭʒ ŶƐ üƑƯƈ ƕƓĬƓƟǁƐ ĬDžƈ

إلى رمز المحبة و الإخلاص. . . إلى الشموس الساطعة والأقمار المنيرة . . . إلى من كان ضوءاً لي في الظلام الحالك

والأمل المتجدد .

ŶƐ !ǋƾƧƟ ƀƐƦƳŬƐ ĬƗƐǋǀƣƈ ǋ ĬƗǋƣǁƄ

إلى من شاركني همومي . . .إلى من جعلهم الله أخوتي بالله. . .

ĬƗƑšĭƣƬǋ ĬƏƑƽƣƬƈ

إلى من علمني. . . الى من ساعدني . . إلى من صاغ لنا علمه . . . . إلى من أنار لنا من فكره منارة. . . إلى سيرة

العلم والنجاح. . .

ƕǁƑøøøƨƥǁƐ ƹƥƪDž

ƱƬƐǋƗDžǁƐ ĬDžƚƴǁƐ ƣǋǄǁƐ ƐƤǀ ăƣǀƈ ƑƴĭDžǄ !ǋĭǁƄ

بسم الله الرحمن الرحيم

الشــكر والتقديـــر

"وقل ربي زدني علمًا"

صدق الله العظيم

إلهي لا يطيب الليل إلا بشكرك ولا يطيب النهار إلا بطاعتك . . ولا تطيب اللحظات إلا بذكرك . . ولا تطيب الآخرة إلا بعفوك . . ولا تطيب الجنة إلا برؤيتك. الحمد لله رب العالمين الذي أكرمني وأعانني على إتمام هذا الجهد المتواضع.

إن الحمد لله نحمده ونشكره ونستغفره ونستعين به ونستهديه، والصلاة والسلام على حبيبنا وقائدنا وقدوتنا محمد(صلى الله عليه وسلم) وعلى آله وصحبه ومن اهتدى بهديه إلى يوم الدين، وبعد:-

لا يسعني إلا أن أتقدم بالشكر الجزيل إلى الاستاذ الدكتور الفاضل فايز أبو عريضة لما بذله من جهد جهيد في إشرافه البناء وتوجيهه السليم، فكان له الأثر الأكبر في إخراج هذه الدراسة. ويشرفني أن أتقدم بالشكر إلى الأستاذ الدكتور حسين أبو الرز والأستاذ الدكتور حسن الوديان على تكرمهم بالمشاركة في مناقشة هذه الرسالة.

شكري وتقديري الى كل من ساهم في التنسيق واخراج هذا الجهد العلمي وأخص بالذكر

السيدة: علا العقرباوي على التدقيق اللغوى.

ƀĭTdžllɛ !ydžNj ĂllNjDŽllɛ !ydž Ljdžƌ 5ĭʓNjŧllɛ Ĭ llNj ŶɛNj

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ɯ	[illegible]
þ	[illegible]
ǉ	[illegible]
ƨ	[illegible]
ɵ	[illegible]
Ʊ	[illegible]
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4	[illegible]
5	[illegible]
6	[illegible]
6	[illegible]
7	[illegible]
	[illegible]
9	[illegible]
31	[illegible]
37	[illegible]
	[illegible]
41	[illegible]
41	[illegible]
45	[illegible]
49	[illegible]
54	[illegible]
	[illegible]
56	[illegible]
63	[illegible]
	[illegible]

[illegible]

[illegible]	[illegible]	[illegible]
54	[illegible]	1
58	[illegible]	2
65	[illegible]	3
67	[illegible]	4
68	[illegible]	5

[illegible]

[illegible]:

[illegible] .(2013). [illegible]

[illegible] 14 [illegible].

([illegible])

[illegible]

[illegible] (20) [illegible] 14 [illegible]

[illegible] 14 [illegible]

[illegible]

[illegible] (10) [illegible]

[illegible] (10) [illegible]

[illegible]

[illegible] (David Fabricius, 2011)

[illegible]

(40-35) [illegible].

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

üNjŬɛ üƬƻǁɛ

- ƑNJƗĭDŽǉǆNj ƺƨɛƥƣǁɛ ƺDŽƣƫDŽ
- ƺƨɛƥƣǁɛ ƺƚl ƪDŽ
- ƺƨɛƥƣǁɛ Ƹ ɛƣǉǆ
- ƺƨɛƥƣǁɛ lƑĭƮƥʒ
- ƺƨɛƥƣǁɛ lƑƟƚƯƬDŽ

[illegible]

[illegible]

[illegible] .(Mcardle, Katch & Katch, 2001) [illegible]

[illegible] .(Coetzee, 2007) [illegible]

[illegible]

.(Chu, 1998)

.(Twist and Benickly, 1995)

(Potteiger et al., 1999) (Craig, 2004)

(Coetzee, 2007)

.(Chu et al.,2006)

[illegible]

[illegible] 14 [illegible]

[illegible]

[illegible] (Wilmore and Costill , 2004) [illegible]

[illegible] (Michael et al, 2006) [illegible]

[illegible]

[illegible] 14 [illegible]

[illegible]

[illegible] -1

[illegible] -2

[illegible] -3

[illegible]:

[illegible]:

1. [illegible] ($\alpha \leq 0.05$) [illegible]

2. [illegible] ($\alpha \leq 0.05$) [illegible]

3. [illegible] ($\alpha \leq 0.05$) [illegible]

[illegible]:

[illegible] (Wilmore and Costill, 2004).

Ɖƥƕƌž Ĭǁƶ ƥƌžƙƶŏ ĭƦ!ƒĂ Ɨǂƨơƙƌž!ƒ ƗƌžĂƓƖƌž!ƒ ƘƓǇŏƨƌžƙ Ǉƌž ƳĂǇ ĂǊ :ĬəƑƊžǁɛ ăƥƗƊžǊĭǂƓǁɛ ƒĭƥƣƗǁɛ

Ŏ!Ɠƙ!ƓƕĂ ÜƔƛĂ!ƒ ƥƶƕ ƱĂƕǌ!ƒ ýűƤ Ƙǚ ưƶ!ƒ Ŏƽ ƗƑƞƓƽƌž!ƒ Ɨ!ƓƱǘ! Σǂƶǉƌž!ƒ ýƶƽ!ƒ ƥƨ

.[*]ŎƑƓƌž!ƒ ƱƖĂ!ƒ ýƤƒƥ Ɨŏǂƨơ!ƒ ƘƒƥơĂ!ƒ Ǉƌž ŎƽƓ ưǫ ƥƥƵ ƥŏǉƞƙ

ĂƬ "Ǉǂƌžŏ Ɠƌž ƳƨƖƌ ăƨƤƉ ƖƨƌžƳƨƓƖƙ!ƒĂ ǉƓƞƙǛƒ ƨŏŏƺƙĂ ƌƱƓƕƙ!ƒ Ĭǁƶ ƖƨƥǀƖ!ƒ" ŎǊ ƕƨƑƖƥǁɛ

.(Chu et al ,2006) ǇĂƨƤƈĂ

(*) ƨŏƨƶƙ ƻŏƨƶƙ .ŎƒƒƨƞǪ

(Jump Training)

.(Chu, 1998)

Plyometrics

"Yuri- Verochansky" Training

(Siff, 2003)

(Radacliff & Frances, 1999)

(Dintiman et al, 1998)

1975

. Fred Welt

(Chu, 1998)

"Metric" "Ply"

(Dintiman et al, 1998)

" Plythyeil "

"Plio"

"Metric"

[illegible]

[illegible] (Potash & Chu, 2008) [illegible]

[illegible] (Potash & Chu, 2008) [illegible]

[illegible]

[illegible] (Chu, 1998) [illegible]

[illegible] (Eccentric) [illegible]

[illegible] (Concentric) [illegible]

[illegible]

[illegible]

[illegible] (Allereilgen 1994) [illegible]

[illegible]

1- [illegible]

[illegible]

2-

3-

Chu

(Verochansky)

[illegible]

[illegible]

[illegible] (Sharkey, 1990) [illegible]

[illegible] (Brown, Moyhew, Bdeach, 1986) [illegible]

(Miller & Power, 1981)

(Aramand, 1982)

(Gerogary, 1986)

(Sigmon, 2003)

(Wilmore and Costill , 2004)

[illegible] (Chu et al, 2006) [illegible]

[illegible]

[illegible] .

[illegible] (Yessis, 2009) [illegible]

[illegible] .

[illegible]

[illegible] (Chu et al, 2006) [illegible]

[illegible]:

1. [illegible].
2. [illegible].
3. [illegible].
4. [illegible].
5. [illegible].
6. [illegible].
7. [illegible].
8. [illegible].

[illegible]:

[illegible]

[illegible]

حيث أنّ أداء بعض الواجبات التّدريبية خاصة ذات الشّدة العالية عندما يكون اللاعب مرهق أو متعب قد يعرّضه للإصابات بدرجة عالية، لذلك يجب الانتباه جيدًا لفترات الرّاحة والعوامل المختلفة التي يمكن أن تعرّض اللاعبين للإصابات. وغالبًا ما يتعرّض اللاعبون للإصابات خلال نهاية الوحدة التّدريبية، وخاصة عندما يطلب المدرب من اللاعب محاولة أو تأديتها مرة أخرى على حد قول: "دونالد شو "Just one more" ، وقد تعد الرّكبة ومفصل القدم من أكثر المناطق التي تتعرض للإصابات، كما يجب على المدرّب تجنّب الحمل الزّائد ومراعاة مبادئ التّدريب وخلال أداء الأثقال الإضافيّة سواء الأحزمة أو الصديري أو غير ذلك خلال الوثب، أو أداء التّمرينات.

❖ [illegible]

[illegible]

[illegible] (Chu et al ,2006) [illegible]

[illegible] (Sheppard & young, 2006) [illegible]

[illegible] (Sheppard & young , 2006) [illegible]

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]

[illegible]

[illegible] .(Thein & Brody,1998) [illegible]

[illegible] 1998 [illegible] .(Thein & Brody, 1998; Hoogenboom & Lomax, 2004) [illegible]

[illegible]

[illegible] .(Thein & Brody, 1998) [illegible] (Harrison & Bulstrode, [illegible] .1987)

. (Prins & Cutner, 1999)

1.0 ... 0.97 ... 0.95 ... 1.0

(Harrison & Bulstrode, 1987)

.(Prins & Cutner, 1999)

. (Prins & Cutner, 1999)

[illegible]

[illegible]

[illegible]

[illegible] .(Hoogenboom & Lomax, 2004) [illegible]

[illegible] (Thein & Brody, 1998) [illegible]

[illegible] 28°C [illegible] 26°C [illegible]

[illegible] (Hoogenboom & Lomax, 2004) [illegible]

[illegible]

[illegible]

(Serway & [illegible] .Jewett, 2004) [illegible]

.(Thein & Brody, 1998) [illegible]

[illegible]

[illegible] .(Pantoja et al., 2009)

[illegible] . (Harman & Garhammer, 2008) [illegible]

[illegible] (Prins & Cutner, 1999) [illegible]

.(Colado & Triplett, 2010) [illegible]

. (Thein & Brody, 1998)

. (Thein & Brody, 1998)

. (Serway & Jewett, 2004)

.(Prins & Cutner, 1999)

12

(Hoogenboom & Lomax, 2004)

.(Hoogenboom & Lomax, 2004)

.(Hoogenboom & Lomax, 2004)

(Bow force)

(Hoogenboom & Lomax, 2004).

(Kent, 2004; Harman, 2008)

.(Kent, 2004)

.(P yh nen, 2002)

[illegible]

[illegible]

Hoogenboom) [illegible]

.(& Lomax, 2004

[illegible]

[illegible]

.(Kent, 2004) [illegible]

[illegible]

[illegible]

[illegible]

[illegible] .(Hay & Reid, 1988) [illegible]

[illegible]

.(Kent, 2004) [illegible]

(Sherrill, 2004) [illegible]

[illegible]

(Mcardle et al., [illegible]

[illegible] .2001)

.(Sherrill, 2004) [illegible]

❖

.(Thein & Brody, 1998)

.(Miller et al., 2002)

(DOMS)

(Pantoja et al., 2009)

❖

(Siff 2003)

. (Miller et al., 2002)

.(Siff 2003)

(Siff, 2003)

.(Colado 2010)

.(Miller 2002)

(DOMS)

(Jamurtas et al. 2000)

(Eccentric Phase)

(Concentric Exercises)

(CK)

.Lactate Dehydrogenase (LDH)

(Miller 2002)

(Robinson 2004)

[illegible]

[illegible] .(Gulick 2007; Jones,2008) [illegible]

[illegible] (Miller 2001;Gulick 2007). [illegible]

[illegible] (Miller 2002; Martel 2005) [illegible]

[illegible]

[illegible]

. (Chu, 1998)

. (Voight & Tippett, 2004)

.(Chu, 1998; Potash & Chu, 2008)

.(Miller 2001)

(Miller et al, 2006)

(Miller et al, 2006)

[illegible]

[illegible] (Potash & Chu, 2008) [illegible]

[illegible] . (Voight & Tippett, 2004) [illegible]

[illegible] (Myer [illegible] 2006) [illegible]

(Potash & [illegible]

.Chu, 2008)

[illegible]

[illegible] (Potash & Chu, [illegible] .2008)

[illegible] (Potash & Chu, 2008) [illegible]

[illegible] (Wilk et al., 1993; Newton et al., 1997) [illegible]

.(Potash & Chu, 2008)

.(Voight et al., 1995)

.(Potash & Chu, 2008)

(Chu, 1998)

(Potash & Chu, 2008)

(Chu, 1998)

10 ... 10

.(Piper & Erdmann, 1998; Radcliffe & Farentinos, 1999)

(Chu, ... .1998)

(Voight & Tippett, 2004)

(Myer et al., 2006)

.(Potash & Chu, 2008)

[illegible]

[illegible] (Chu, 1998; Potash & Chu, 2008) [illegible]

[illegible] . (Chu, 1998) [illegible]

[illegible] .(Voight & Tippett, 2004) [illegible] (Coetzee 2007) [illegible] 10 [illegible] 10 [illegible]

[illegible]

[illegible] 100 [illegible] 80 [illegible] 140 -120 [illegible] 120 - 100 [illegible] (Coetzee, 2007; Potash & Chu, 2008) [illegible]

[illegible] .(Potash & Chu, 2008) [illegible]

[illegible]

[illegible] (Coetzee, 2007) [illegible] .(Potash & Chu, 2008) [illegible] 72 [illegible] 48 [illegible] (Coetzee, 2007) [illegible] .(Chu, 1998) [illegible]

[illegible] (Voight & Tippett, 2004) [illegible] .(Chu, 1998; Voight & Tippett, 2004) [illegible]

[illegible]

[illegible] (Myer et al., 2006) [illegible] .(Piper & Erdmann, 1998) [illegible]

(Piper & Erdmann, 1998)

60-45

15 -10 (Chu, 1998; Coetzee, 2007)

.(Chu, 1998)

(Myer et al., 2006)

.(Potash & Chu, 2008)

(Michael et. al, 2006)

(6)

(6)

(18) (28)

Gulick, Libert, OÎMelia& Taylor,)

(2007

42

3.47 ³ 24.5 :18 = 24 =

(2%;

$p<0.05$)

($p<0.05$)

(Jones, 2008)

12

(6 =

(6 =

($p=0.048$)

[illegible] (p=0.6) [illegible]

[illegible]

2010 Kamalakkanna,) [illegible]

[illegible] (Vijayaragunathan & Azeem

[illegible]

[illegible] 30 [illegible]

[illegible] 20 - 18

[illegible]

[illegible] 6 [illegible]

[illegible]

Standing Broad) [illegible] (Shuttle Run) [illegible]

[illegible] (Jump

[illegible]

(David Fabricius, 2011)

25

76.1 ³ 11.9 176 ³ 6.9 16.3 ³ 0.8

(17 = LJ) (17= LJ) (18

(Repeated Fitrodyne Countermovement Jumps)

(Sergeant Vertical Jump)

40-10 (The Illinois Agility Test)

.(RepeatedFitrodyne Countermovement Jumps)

[illegible]

[illegible] Singh Bal, JeetKaur & 2011) [illegible]

[illegible] (Davinder Singh, (30 = [illegible]) [illegible] 24 [illegible] 18 [illegible] 75.5 ³ [illegible] 1.87 ³ 0.06 [illegible] 22.5 ³ 0.4 [illegible] 5.2 [illegible] (15 = [illegible]) [illegible] (15 = [illegible]) [illegible] 25 [illegible]

[illegible] Lim Joe Heang, [illegible] (WeeEng Hoe. Chan Kai Quin, &LerHui, Yin, 2012 [illegible]

Džǒƪlķ Džķ ƚǒơ Ƌǉƪ 20-18 Ƨdžžƅ lƧƒƠƱ!ƒ ƚTǒƧ!ƒ ƽƠƪdžƅ LJǒƚƧƠTdž!ƒ Ɣǔƃ!ƒ LJdž Ɣ!ƠƱ 42

(16 ƚƠǉǫ Ü7 = ƧĂƚȐ Ü23 = LJ) ƚƱƅƠƲ ƚƵĂdžƞdž ƚǒƒƒĂTƶ!ƒ ƚlǒƧƱ!Ơƅ LJǒķƵĂdžƞdž! ƚǉǒƶ!ƒ

ǏƗƵ ƇƠǉƅ DžnjƅǒƧƥķ Džķ LJǒķƵĂdžƞdž!ƒ ǘƚ (11 ƚƠǉǫ Ü8 ƧĂƚȐ Ü19 = LJ) ƚǒƅǒƧƞķ!ƒ ƚƵĂdžƞdž!ƒĂ

ǐƧķdžĂǒƗƅ!ƒ ƘƠƅǒƧƥķ!ƒ ƚƼƠƯǫ DžķĂ .ƴǒƅƠƪƊ ƚķƪ lƥdž!Ă ƳĂƅƪǓƠƅ lƧdž ƜƠnjǉdž!ƒ ƝdžƠǉƧƅƅ ƚƚƧƠTdž!ƒ

ƚƵĂdžƞdž!ƒ ƘƧnjƲƊ Ă . ƚƿƠTƧƗ! ƩƠǒl! ăĂǉǒƗ!ƒ ƚƶdžƠƞ ƧƠƅķƤƒ DžƒƥƤķƪƒ DžķĂ ƚƱƅƠƯ!ƒ ƚƵĂdžƞdžƗ!

ƠnjķǉƧƠldž ƥǉƵ ƚǒƥƶƅ!ƒ ƘƠƪƠǒl!ƒ ýǘƤ LJdž ƚƿƠTƧ!ƒ ƧƬǉƵ ƝƑƠķǉ ƱƪĂķdžƅ ǗƲĂơƗdž ǕǉǉƪơķƚǒƅǒƧƥķ!ƒ

ƚƱƅƠƯ!ƒ ƚƵĂdžƞdž!ƒ LJdž (%7) ƧƅƚƊ LJƪơķ ƚǒƅǒƧƞķ!ƒ ƚƵĂdžƞdž!ƒ ƘƧnjƲƊĂ .ƚǒƗƅl!ƒ ƘƠƪƠǒl!ƒ ƴdž

ƔǒƧƥķ!ƒ LJƊ Ǐ!ǫ ƚơƠƅ!ƒ ƧƠTƊ Ă .ƚǒƥƶƅ!ƒ ƘƠƪƠǒl!ƒ ƱƪĂķdž ǏƗƵ ƇƠǉƅ (P= 0.012) (% 2.5)

ƔǒƧƥķ!ƒ LJƊĂ ǑƅǒƧƥķ!ƒ ƝdžƠǉƧƅ!Ơƅ LJǒƚƧƠTdž!ƒ ƚǉǒƶ!ƒ ǐƥ! ƚƿƠTƧ!ƒ ƧƬǉƵ LJƪơ ǐƧķdžĂǒƗƅ!ƒ

. ƚƼƗķƤdž!ƒ ƘƠƯƠǒƧ!ƒ ǑƿƠƅ Ǒƽ ƚƿƠTƧ!ƒ LJǒƪơķ! ƔǒƧƥķƚ Ǌƅ ǏƬĂǒ ǐƧķdžĂǒƗƅ!ƒ

DžǒǒlķLJƵ ƚơƅƗ! ƘƼƥǋ ƚƪƒƧƥƅ (Asadi; Arazi, 2012) ăȐƐƥƈǋ ăɋƨǓƐ LJdž ýƚ DžƠƿ

ƔƛĂ!ƒĂ ÜƚƿƠTƧ!ƒ ÜǑƚǒdžƠǉǒƒƥ!ƒ LJƨƒĂķ!ƒ ƇƒƥƊ ǏƗƵ lƥT!ƒ ƴƼķƧdž ǐƧķdžĂǒƗƅ ǑƅǒƧƥķ ƝdžƠǉƧƅ ƧǒƛdžķlƧƚ ƔƵǓ ƧTƵ ƚķƪ ǁƧƠT .ƚƗƪ!ƒ lƧƚ ƚƯƠǒƧ Ǒƽ LJǒlǋƒƧdž!ƒ ƧĂƚȐ!ƒ ǐƥ! Ăƥƶ!ƒ Ă ǐƥĂdžƠƶ!ƒ

ƥƥƵ ƸƗƅĂ ǐƧķdžĂǒƗƅ!ƒ ƔǒƧƥķ!ƒ ƚƵĂdžƞdž :LJǒķƵĂdžƞdž Ǐ!ƒ ƚǉǒƶ!ƒ Džǒƪlķ DžķĂ ƚƪƒƧƥ!ƒ ǉȐǋ Ǒƽ ƚƗƪ!ƒ

LJƠķƧdž ǐƧķdžĂǒƗƅ!ƒ ǑƅǒƧƥķ!ƒ ƝdžƠǉƧƅ!ƒ ƽǒƅƱķ Džķ .(8 = LJ) ƚƱƅƠƯ ƚƵĂdžƞdž Ă (8 =LJ) ƠnjķǉǒƵ

Star Excursion) LJƨƒĂķƗ! ƻƒƧơǉǓƒ ƧƠƅķƤƒ DžƒƥƤķƪƒ DžķĂ ƴǒƅƠƪƊ ƚķƪ lƥdž! Ă ƥơƒĂ!ƒ ƳĂƅƪǓƠƅ

Vertical Jump) ǐƥĂdžƠƶ!ƒ ƔƛĂ!ƒ ƧƠƅķƤƒĂ LJƨƒĂķ!ƒ ƧƬǉƵ ƩƠǒl! (Balance Test (SEBT)

lĂl!ƒ ƩƠǒl! (Standing Long Jump (SLJ)) ƘƠƛ!ƒ LJdž ƯǒƧƶ!ƒ ƔƛĂ!ƒ ƧƠƅķƤƒĂ ((VJ)

ƧƠƅķƤƒĂ T ƻƧơ ýƚTƅ ǐƧƞ!ƒ ƧƠƅķƤƒĂ (Shuttle Run) ǐƥƒƥķƧǓƒ ǐƧƞ!ƒ ƧƠƅķƤƒ Ă ƚǒƧƠƞƼǉǓƒ

[illegible] 20 [illegible]

[illegible]

[illegible] (VJ) ($P < 0.05$) (~23%) [illegible]

[illegible] (~7%) [illegible] (SLJ) (~10%)

[illegible] (~9%) [illegible] 20 [illegible] (~7%) [illegible] T(~9%) - [illegible]

[illegible] ($P > 0.05$) [illegible]

[illegible] (~4%) [illegible]

[illegible].

(Coetzee, Arazi, & Asadi , 2012) [illegible]

[illegible]

[illegible] 18 .[illegible]

[illegible] (18.81 ± 1.46) [illegible]

.[illegible]

[illegible]

[illegible]

[illegible]

[illegible] ($p>0.05$) [illegible]

[illegible]

[illegible] ($p<0.05$) [illegible]

[illegible]

[illegible] 8 [illegible]

Brian 2012) [illegible]

[illegible] (Fox, Joe Hauser, Benjamin Krings, Chase, OÎKeefe

[illegible]

[illegible] 22 . [illegible]

[illegible] ([illegible] 5 [illegible] 16) [illegible]

[illegible]

[illegible]

20 [illegible] (T) [illegible]

[illegible] 40 [illegible]

[illegible] 20 [illegible] (T) [illegible]

[illegible] 40 [illegible]

[illegible] 20 [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (Raj Kumar, 2013) [illegible]

[illegible]

(30 = [illegible]) [illegible] 30 [illegible]

15 [illegible] 25-20 [illegible]

[illegible]

[illegible] (T) [illegible]

[illegible]

[illegible]

(14.61) ... (ANCOVA)

... .(14.73) ...

... (14.99) ... (14.35) ...

... 6 ...

(Brian et al, 2012)

(David Fabricius, 2011) (et al,2012 Coetzee)

(Kamalakkanna, 2010)

(Gulick et al,2007)

8 - 6

8

[illegible]:

1- [illegible]

2- [illegible] 14 [illegible].

3- [illegible] 9 [illegible] 11 [illegible] 6 [illegible] 4 [illegible] 7 [illegible] 1 [illegible] 8 [illegible].

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

:ƕƽĭÿƖƐ ƥƑĭƗƢƐ Ưǋƥƪ

- .ƗƪƒƧƥ!ƒ ǉƦǋ Ǒƀ ǋǇƕƊ ǁƒƧƘƬƹ ǏǁƵ Ɣ!ƠƱ!ƒ ƧǆƊ Ǒ!Ă Ɨ|ƀƒĂǆ ǀƧĂƧư
- .ǑƕƱ!ƒ ƒ ơƅ!ƒ ƜƦĂǆǉ ƗƑƕƶƙƕ ǁƧƠƬǆ!ƒ ǅĂǀǒ ǇƊ
- .ǊǆƠǉƧƕ!ƒ ƦǒƅǉƙƗ Ǒƀ ǅƒƨƙ!ǙƠƕ ƥǌƶƙ!ƒ

:ƕǆĭÿƖƐ ǄƷƑ|Ɨ

ƘƠùƀƒƧơǉǕƒĂ ƗǒƕƠƪùơ!ƒ ƘƠƱùƪĂƙǆ!ƒ ƜƒƧƤƙƪƠƕ Ɨ ơƠƕ!ƒ ǅƠƿ ƘƠƵĂǆƞǆ!ƒ ƋƀƠƗƙ ǇƊǆ ƾ|ơƙǁ!

ÜǑ!ĂǕƒ ƗǒƕƧƞƙ!ƒ) ƗƵĂǆƞǆ!ƒ ƧǒƷƙǆ! ƠƶƕƙǇƨĂ!ƒĂ ýĂƱ!ƒĂ ƧǆƶƵ!ƒ ǇƊǆ ý!ƗƘ" ƧƠƕƘƤƒĂ ƗǒƧƠǒƶǆ!ƒ

:ǁ!ƦǇǒƕǒ (1) ǅƿƧ ýĂƥƞ!ƒĂ Ü(ƗǒǉƠƛ!ƒ ƗǒƕƧƞƙ!ƒ

(1) üǋƢƜ

ǇƨĂ!ƒĂ ýĂƱ!ƒ ǏǁƵ ǅĭƗƳǋǅƜǅƗǁ "ƪ" ƥƑƠƗƢƐǋ ƕĭƥƑĭÿǅƖƐ ƪƑƷƥƟǆǛƐǋ ƕĭƠƑƨƟƖƐ ƪƑƯƨǋƗǅƖƐ

ƕǁǙƢƖƐ ƕĭƏƑƬƟǕƐ	ƪƑƜƥƢ ƕĭƥƟƖƐ	ƕǅǅĭƅ "ƪ"	ƷƐƥƟǆǛƐ ăƥƑĭÿǅƖƐ	ƯƨǋƗǅƖƐ ǏƠƑƨƟƖƐ	ƢƢÿƖƐ	ƕƳǋǅƜǅƖƐ	ƥĭƷƗǅƖƐ
.296	18	1.074	.064	1.69	10	ƗǒƕƧƞƙ!ƒ 1	ƧƙǆƵ / ýĂƱ!ƒ
			.035	1.66	10	ƗǒƕƧƞƙ!ƒ 2	
.709	18	-.379	15.500	68.24	10	ƗǒƕƧƞƙ!ƒ 1	ǅƷƗ / ǇƨĂ!ƒ
			15.243	70.72	10	ƗǒƕƧƞƙ!ƒ 2	

- .ƗƪƒƧƥ!ƒ ƇƒƧƞƹ ƥǉƵ Ɨǉƪ (14.3) ƗƪƒƧƥ!ƒ ƗǉǒƵ ƥƒƧƀƊ ăƥ! ƧǆƶƵ!ƒ ƠƪĂƙǆ ƸƕƠ: ƗƯơǕǆ

ƻƒƧơǉƠƕĂ Ü(1.69) ƸƕƠ Ǒ!ĂǕƒ ƗǒƕƧƞƙ!ƒ ƗƵĂǆƞǆ!ƒ Ǒƀ ýĂƱ!ƒ ƠƪĂƙǆ ǇƹƠ (1) ýĂƥƞ!ƒ ǇƊǆ ǇǒƕƙǑ

Ü(1.66) ƸƕƠ ƗǒǉƠƛ!ƒ ƗǒƕƧƞƙ!ƒ ƗƵĂǆƞǆ!ƒ Ǒƀ ƇƠƞ ýĂƱ!ƒ ƠƪĂƙǆ ƠǆǉǒƕƠ Ü(.064) ǏƧƠǒƶǆ

Ǒ!ĂǕƒ ƗǒƕƧƞƙ!ƒ ƗƵĂǆƞǆ!ƒ ăƥ! ǇƨĂǅ! ǑƕƠƪơ!ƒ ƠƪĂ!ƒ ƇƠƞĂ .(.035) ǏƧƠǒƶǆ ƻƒƧơǉƠƕĂ

ŁŏŀŏƨƞƙŀƒŁƵǍƌƞƌŀƒ Ŏ5 ǈɀǍŀ! ŎŀƓ ƪơ!ƒ Ʊƪ Ǎ!ƒ ƓƌǬ Ü(15.500) ĭ ƧƓŏƶƌ ƻ ƒƨơǈƓŀǍ Ü(68.24)

.(15.243) ĭ ƧƓŏƶƌ ƻ ƒƨơǈƓŀǍ Ü(70.72) ƸŀŀŁŏǈƓǍ!ƒ

Ŏ5 (0.05≥α) ŁŏƑƓ Ƭ ơŰƒ Ł!Ǚƥ!ƒ ăǍƙ ƪƌ ƥǈƵ ŁŏƑƓ Ƭ ơƍ Ł!Ǚƥ ƘƒƦ ƾǍƧ5 ƥǍƞǍ ƌƥƵ ǈǑŀŏ ƒƦǋǍ

ƋƼƓǂƙ ĬŀƵ ýƥŏ ƓƌƶƌǈǑƙŏŀŏƨƞƙŀƒ ǈǑƙƵǍƌƞƌŀƒ ǈǑŀ (ǈɀǍŀƒ ÜýǍƱŀƒ) ŁŏƌƪƞŀƒƒƑƓ Ƭ Ƥ!ƒ ƩƓŏƥ

.Łƪ ƒƨƥ!ƒ ŎƙƵǍƌƞƌ

:ŀĬŸűƯŁɀŰƐ ŀɀƐƥơŀƐ

Ł ùơŀŀ! ŁŏƪƓƪŰƒ ŁǈŏƶŀƒƜƨƓƤ ǈƌ ǈŏƑƬƓǈ Ē ŁǈǍǂƌ ŁǈŏƵ ĬŀƵ ŁŏƵűƱƙƪŰƒ Łƪ ƒƨƥ!ƒ ƘŏƨƞƊ

: ŎƙŬƒ ƻ ƥǌŀ ǁ!ƦǍ ƌ2013\3\23 Ĭ!ƒ ƌ2013\3\3 ǀƧƙƼ!ƒ Ŏ5

- . ƘƒƨƓŀƙƤŬƒ Ǎ ƘƓƪƓŏǀ!ƒ ƓƒƨƞƍƯ ƧƙƶƙƥƤ Ŏƙ!ƒ ƘűǂƬƌ!ƒ ĬŀƵ ƻ ǍƤǍ!ƒ
- Ǎ ƔŏƨƥùƙƒǍ ƩƓùŏǀ!ƒ Ŏù5 ŁƌƥƤƙƪƌ!ƒ ǀɀǌƞǕƒǍ ƘƒǍƥǕƒ ŁŏơűƬ ăƥƌ ĬŀƵ ƻ ƧƶƙƒƵ.Łƪ ƒƨƥ!ƒ ƻ ƒƥǋƊ ƾŏǀơƙ! ƓǌƙŀƪƓǈƌ
- ƘùƤǍ!ƒǍ ƘƒƨƓùŀƙƤŰƒ ƾŏŀƱƙ ŁǀŏƨƱ ǈƌ ƥǂƙ!ƒǍ ƘƓǈƓŏŀŀ! ýŏƞƪƙ ƘƒƨƓƌƙƪƒ ŁƌƑűƌ ăƥƌ.ƓǌǀŏŀƱƙ Ŏ5 ƾƧƷƙƪƌ!ƒ
- .Łƪ ƒƨƥ!ƒ Ŏ5 ŁƌƥƤƙƪƌ!ƒ ƘƒƨƓƙƤű! ŁŏƌǁƵ!ƒ ƘűƌƓƶƌ!ƒ ƔƓƪơ
- ǀƥùơǍ ƾŏŀƱƙ ƌƙ Łŏơ ýƓƌơƊ ƘƓƞƨƥŀǍ ŁŏƑƓǌǈ!ƒ ǋƙƧǍƬ Ŏ5 ǊƌƓǈƨŀ!ƒ ŁŏơűƬ ǈƌ ƥǂƙ!ƒ.(ƱƪǍƙƌ ýƌơ ÜĬ ƬƤƊ ýƌơ ÜýƼƙƧƌ ýƌơ) ŁŏŀŏƨƥƙƘ

: ĬŁŎƐ ƌŸ ŀĬŸűƯŁɀŰƐ ŀɀƥƐơŀƐ ǈƤǈ ƛƏƑŁƌ ǀ ƥƻɀƓ ơƼǋ

- .ǊƌƓǈƨŀ!ƒ ƦŏƼǈƙ ƓƓǈǍƊ Łơƍŀ!ƒ ǋƞƒǍƙ ƥƤ Ŏƙ!ƒ ƘƓǍƶƬ!ƒǍ ƘűǂƬƌ!ƒ ĬŀƵ ƻ ƧƶƙƒƵ
- . Łơŀ!ƒ ƘƒƓƨƞƍ ƦŏƼǈƙ! ŁƌɀŰ!ƒ ǀɀǌƞǕƒǍ ƘƒǍƥǕƒ ŁŏơűƬ ǈƌ ƥǂƙ!ƒ

- [illegible] 40 [illegible]
- [illegible] 10 [illegible] 10 [illegible].
- [illegible] ([illegible]).

[illegible]:

[illegible]:

[illegible]

[illegible] (4) [illegible].

1- [illegible].

[illegible]:. [illegible]

[illegible]: [illegible]

[illegible]: [illegible]

[illegible]

[illegible].

[illegible]: [illegible]

[illegible] (0.1) [illegible].

2- [illegible].

[illegible]: [illegible]

[illegible]: [illegible]

66 [illegible].

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

3 - [illegible]

[illegible]

[illegible] (4) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] : يُحتسب الزمن من لحظة الانطلاق عند سماع الإشارة حتى إنهاء جميع المراحل والمرور بالقمع الذي انطلق منه اللاعب

: ǀ ɛϸƑƠƗƢǀǘǁ ƕǓƊǅǂƴǁɛ ǀ ǘƊǅƑƴƊǅǁɛ

: ϸƑƠƗƢǀǗɛ 5ƣ T

ǸǅƒϸƤƙƪƒ Ǆƙ Ǵǅ ǇǅǍ ÜΣǴöl!ƒ ƗǒǅǅƵ ƗơƮ ǏǅƵ ýϸƙ Ǒƙ!ƒ ýǅƒǍƶ!ƒ ǇǅǍ ƧǴƙƤǛƒ ƽϸƮ ϸƶǒ

ǁ ù!ƦǍ ăǍƙơǅ!ƒ ƽϸƮ ƗǀǒƧƱ ƗơǴ!ƒ ǅϸƤƙƪƒ ǴǌǇǅǍ ÜǸǅηǕ ƘƶưǍ Ǵǅ ǘƶ5 Σöǀƙ ƘƒƧǴƙƤƒ ǇǅǍ

ƽϸùƮ ƒǍƧùƥƒ ǄǌǇǇ ƗöơÜǇöƮƮƤƙǅ!ƒǍ ǅƒƧƥƤ!ƒ ǇǅǍ (5) ǏǅƵ ƗǅϸƤƙƪǅ!ƒ ƘƒƧǴƙƤǛƒ ƯƧƶ

(2) ƽùơǅǅ!ƒǍ ÜǸùǅηǅ ǇùǅǍ ƘƶưǍ Ǵǅ Σöǀƙ ƘƒƧǴƙƤǛƒ ǇǅǏǇƶǅ ÜƘƒƧǴƙƤǛƒ ǇƦǌ! ăǍƙơǅ!ƒ

.ǇöƮƙƤǅ!ƒǍ ǅƒƧƥƤ!ƒ ǴǴǅƪƒ ƠưǍö

:ϸƑƠƗƢǀǗɛ ǀ ƑǴƙ

(Test Re-Test) ƧǴùƙƤǛƒ ǀϸǴƵƍǍ ƧǴƙƤǛƒ ƗǀǒƧƱ ƽǀơƙ!ƒ Ǆƙ ϸǀ5 ÜƘƒƧǴƙƤǛƒ ƘǴǍ ǇǅǍ ϸƗǅƙǅ!

ǇǅǍ ƗǌǍƗǅ ƗƪƒƧϸ!ƒ ƗǌǒƵ ƜƧǴƤ ǇǅǍ ƗƵǍǅηǅ ǏǅƵ ǇǅƵǍƪǇ ϸƶǌ ǸǀǒƱƙ ǀϸǴƵƍǍ ÜƧǴƙƤǛƒ ƽǒƱƙ

Ǉǒǌ ƟǍƒƧƙ ƗöơÜǇǅƙƧǅ!ƒ Ǒ5 ǄǌǇƒƧǒϸǀƙ ǇǒǌǇǍƪƧǌ ƱǴƙƧƒ ýǅǴƶǅ ƔǴƪơ Ǆƙ ǄǍ ǇǅǍ ÜϸƒƧ5Ǉ (6)

ǇƦùǸǌ ƘǴùǒǴƺ! ƗùǅƑǘǅ ǄǒùǀǍƒ ǇƦǌ ƘƧƙƵƒǍ Ƙǘǅǅǅ!ƒ ǇƦǌ ǇǒǅǓ (2) ýǍϸη!ƒǍ .(0.94-0.87)

ƗƪƒƧϸ!ƒ

(2) üǸƣǁ

ǀ ɛϸƑƠƗƢǀǘǁ ƔƣƑƳǕɛ ǀ ƑǴƙ üǅǅƑƴǅ

ǀϸǴƵǗƒ ƘǴǍ	ýǴηǅ!ƒ
.94	.ǑƪƒϸƪýƗƮǍ ƔǍǍ!ƒ ƧǴƙƤƒ
.87	.ƗƥǴƮƧ!ƒ ΣǴöǀ! ăǍǇǒǅ!ƒ ƗƶǅǴη ƧǴƙƤƒ
.93	ƗƥǴƮƧǅ! ΣǴöǀ! Ʈ ƻƧơ ýƗƮǍ ǐƧη!ƒ ƧǴƙƤƒ

.2013/3/26

(Fabricius David, 2011)

- .2013/05/27 2013/04/ 01
- (2) (8)
- (40-35)
-
-
-

(3)

1- (10-5)

2- (25-20)

3- (10-5)

(30)

(2013/05/30)

1 -

2 -

3 -

4 -

5 -

6 -

7 -

.2013/05/27 2013/04/01

[illegible]:

[illegible] (SPSS) [illegible]:

1. [illegible].
2. [illegible].
3. T-test [illegible].
4. [illegible].

[illegible]

- [illegible]
- [illegible]

(3) üNjqlШ

hǔYNjĎŽШĎŽllɛ Ĭƺ ăɑyĜllɛNj Ĭǂĝɬllɛ ĎǎĭɬĭĜƯǂllɛ ĎǎĭĜ "l" ɓƑĜǂɑlɛNj hǔĭɓƑĭyĎŽllɛ lƑƺɛɓΘǚŰɛNj hǔĭĜƑƨΘllɛ lƑƯƨNjǂĎŽllɛ

hǔƨɛɓɑllɛ lɛɓĭƩǂĎŽ ĂǂY (Ĭ Ʈ ɓŮɛ ăɓǂĎŽNjĭǂĜllɛ ƒĭɓɑǂllɛ) ĂllNjŮɛ hǔĭĜĭɓШǂllɛ

hǔllŰɑllɛ hǔĭəƑƬΘŰɛ	lƑШɓɑ hǔĭɓΘllɛ	hǔĎǎĭƺ "l"	ƩɛɓΘǚŰɛ ăɓƑĭyĎŽllɛ	ƯƨNjǂĎŽllɛ ĬĜƑƨΘllɛ	ɑɑY hǔǚĭyllɛ	ƼĭĜƯǂllɛ	YɑΘNj ƧƑĭɬllɛ	ɓƑĜǂɑlŰɛ
.847	9	.198	1.67	17.07	10	Ŏllhp	ł	hǔyĎŽƑШ ɓƑĜǂɑlɛ njNjǚĭǂllɛ
			1.45	17.05	10	ĭ ɓƶŀ!ƒ		
(*) .001	9	4.609	1.50	13.58	10	Ŏllhp	ł	ül ĺĜ ƒƙNjllɛ ɓƑĜǂɑlɛ Ĭ ƨɛɑ ƨ
			1.55	13.34	10	ĭ ɓƶŀ!ƒ		
.560	9	.605	.78	10.41	10	Ŏllhp	ł	ĂǂY ăɓШllɛ ɓƑĜǂɑlɛ Ƭ ül ĺ
			.92	10.35	10	ĭ ɓƶŀ!ƒ		

0.05 ăĂƙĺǆ ɓǉƵ ƜŏƑĜƮơƾ ǂ!ƒɓ (*)

:ŎƙŬƒ (3) ýĂɓɳ!ƒ ǈǆ ǈŏƕŏ

ĭ ƧĜŏƶǆ ƻƒƧơǉĜhĂ Ü(17.07) ăĂǉŏll!ƒ ǂƶǆĜɳ! Ŏllŀl!ƒ ƧĜhƙƤŬƒ Ŏ5 ŎhĜĺơ!ƒ ƱĺĂƙǆ!ƒ ǈD

ƻƒƧơǉĜhĂ Ü(17.05) ĭ ɓƶŀ!ƒ ƧĜhƙƤŰĜh ŎhĜĺơ!ƒ ƱĺĂƙǆ!ƒ Ʃllh ĜǆǉŏŁ Ü(1.67)

ƧĜhƙƤƒ Ŏ5 (0.05 ≥ α) ǂŏƑĜƮơƾ ǂ!Ŭɓ ƘƒƦ ƫĂƧ5 ɓĂɳĂ ĎɓƵ Ĭ llƵ ýɓŏ Ĝǆǆ.(1.45)ĭ ƧĜŏƶǆ

.(.847) Ƙƺllh ǂŏƑĜƮơƾ ǂ!ŬɓhĂ (.198) "Ƙ" ǂǆŏp Ƙƺllh ǂ ŏơ Ü ăĂǉŏll!ƒ ǂƶǆĜɳ

ƻƒƧơǉĜhĂ Ü(13.58) Ŏllŀl!ƒ ƧĜhƙƤŰƒ Ŏ5 ŎhĜĺơ!ƒ ƱĺĂƙǆ!ƒ Ʃllh Ŏĺƒɓĺ ýǂƬh ƔƛĂ!ƒ ƧĜhƙƤƒ Ŏ5Ă

ĭ ƧĜùŏƶǆ ƻƒƧơǉĜhĂ Ü(13.34) ĭ ɓƶŀ!ƒ ƧĜhƙƤŬĜh ŎhĜĺơ!ƒ ƱĺĂƙǆ!ƒ Ʃllh ĜǆǉŏŁ Ü(1.50)ĭ ƧĜŏƶǆ

Ŏĺƒɓĺ ýǂƬh ƔƛĂ!ƒ ƧĜhƙƤƒ Ŏ5 (0.05 ≥ α) ǂŏƑĜƮơƾ ǂ!Ŭɓ ƘƒƦ ƫĂƧ5 Ĭ llƵ ýɓŏ Ĝǆǆ.(1.55)

.(.001) ƘƷǀǀƬ ƗǒƶǴƮƠǫ Ɨ!ǛƥƬǍ (4.609) "Ƙ" ƗǆǒƤ ƘƷǀǀƬ Ɨ ǒƠ Ü

ƻƒƧƠǉƗùƕǍ Ü(10.41) T ý‡ùT Ǐ ùǀƵ ĭƧùƞǀ! Ǒùǀƕl!ƒ ƧǴƕƙƤǛƒ Ǒ5 ǑƕǴƪƠ!ƒ ƱƪǍƙǆ!ƒ ǄǴƞǍ

ƻƒƧƠǉƗùƕǍ Ü(10.35) ĭƥùƶƕ!ƒ ƧǴùƕƙƠǗǴƕ ǑƕǴƪùƠ!ƒ Ʊùƪ ǍƙǆƬ!ƒ Ƹùǀƕ ǴǆǆǉǒƬ Ü(.78)ĭƧǴǒƶǆ

Ɨùƶǆ ǴƞƧǴƕƙƤƒ Ǒ5 (0.05 ≥ α) ƗǒƶǴƮƠǫ Ɨ!Ǜƥ ƘƒƦ ƽǍƧ5 ƥǍƞǍ Ǐǀƶ ýƥǒ ǴǆǆǆǄ.(0.92)ĭƧǴǒƶǆ

.(.560) ƘƷǀǀƬ ƗǒƶǴƮƠǫ Ɨ!ǛƥƬǍ (.605) "Ƙ" ƗǆǒƤ ƘƷǀǀƬ Ɨ ǒƠ Ü ǎǍǉǒǀ!ƒ

ƒǋ‡øƨǓ (**0.05 ≥ α**) ǌǋƗƨøǅ ǫǆƳ ƕĭƏƒƬΘ ƕǁǗǫ ƖƐƤ ƼǋƥƺǫǁǋƗ Ǘ " :ƕĭǆƒƙǁɛ ƕĭƮƥƻǁɛ

ƕøĭǆƒƙǁɛ ƕøĭǴĭƥƜƗǁɛ ƕƳǋǅǆƜǅ‡ǁ ƕĭǆǫǴǁɛ ƕƼƒƪƥǁɛ ƥƬǆƳ ǅĭƨΘƗ Ǎ‡Ƴ ǏƏƒǅǁɛ ǎƥƗǅǋĭ‡Ǵǁɛ ƒĭƥǫƗǁɛ

".ǎǫƴǴǁɛ ǋ Ǐ‡ǴƽǁɛƥƒǴƗǫǗɛ Ǎ‡Ƴ

ƗǒƧǴǒƶǆ!ƒ ƘǴ5ƒƧƠǉǗƒǍ ƗǒƕǴƪƠ!ƒ ƘǴƱƪǍƙǆ!ƒ ƜƒƧƤƙƪƒ ǅƙ Ɨǒư Ƨ5!ƒ ǉƦǋ ƗƠƮ ǇǆƵ ƽlƠƙǀ!

Ü ĭƥƶƕ!ƒǍ Ǒǀƕl!ƒ ǇǒlǒƕƱƙ!ƒ Ǒ5 (ǑƒǴǆ!ƒ ĭƧƙǆǍǒǀƕ!ƒ) ǑǉǴƛ!ƒ ƗǒƕǒƧƞƙ!ƒ ƗƵǍǆƞǆ!ƒ Ǒ5 Ǉǒ‡ƧǴƬǆǀ!

ÜƗƱƕƒƧƙǆ!ƒ ƘǴǇǉǴǒƕǀ! "Ƙ" ƧǴƕƙƤƒ ǅƒƥƤƙƪƒ ǅƙ ƗǒƕǴƪƠ!ƒ ƘǴƱƪǍƙǆ!ƒ ǇǒƕƗǒƶǴƮƠǗƒ ƽǍƧ5!ƒ ǇǴǒƕ!Ǎ

.ǁ!Ʀ ƠưǍǒ (4) ǅƤƧ ýǍƥƞ!ƒǍ

(4) [illegible]

[illegible] "[illegible]" [illegible]

[illegible]

[illegible]	[illegible]	[illegible] "[illegible]"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
(*) .001	9	4.523	1.53	16.87	10	[illegible]	[illegible]	[illegible]
			1.60	16.03	10	[illegible]		
.734	9	.350	1.98	13.87	10	[illegible]	[illegible]	[illegible]
			2.09	13.84	10	[illegible]		
(*) .016	9	2.951	.72	10.49	10	[illegible]	[illegible]	[illegible]
			.85	10.20	10	[illegible]		

(*) [illegible] 0.05

:[illegible] (4) [illegible]

[illegible] (16.87) [illegible] (16.03) [illegible] (1.53) [illegible] (1.60) [illegible] (0.05≥α) [illegible] (4.523) "[illegible]" [illegible] (.001)

[illegible] (13.87) [illegible] (13.84) [illegible] (1.98) [illegible] (2.09) [illegible] (0.05≥α) [illegible] (.350) "[illegible]" [illegible] (.734).

(5) [illegible]

[illegible] "[illegible]" [illegible]

[illegible]

[illegible]	[illegible]	"[illegible]"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.153	18	1.492	1.45	17.05	10	1 [illegible]	[illegible]	[illegible]
			1.60	16.03	10	2 [illegible]		
.552	18	-.606	1.55	13.34	10	1 [illegible]	[illegible]	[illegible]
			2.09	13.84	10	2 [illegible]		
.712	18	.375	.92	10.35	10	1 [illegible]	[illegible]	[illegible]
			.85	10.20	10	2 [illegible]		

[illegible] (5) [illegible]:

[illegible] (17.05) [illegible] (1.45) [illegible] (16.03) [illegible] (1.60) [illegible] (1.492) "[illegible]" [illegible] $(0.05 \geq \alpha)$ [illegible] (.153).

[illegible] (13.34) [illegible] (1.55) [illegible] (13.84) [illegible] (2.09) [illegible] $(0.05 \geq \alpha)$ [illegible] (.606) "[illegible]" [illegible] (.552).

ƔŏƧþùƙ!ƒ ƗùƵĂďžŋďžľ! T ý‡ùT Ĭ ùľƵ ĭ Ƨŋľ! ĭ þƶƅ!ƒ ƧĜƅƙƤŬƒ Ŏ5 ŎƅĜʅơ!ƒ Ʊʅ Ăƙďž!ƒ ĈĜŋĂ

ŎƅĜʅ ùơ!ƒ Ʊù ʅĂƙďž!ƒ Ƹùľƅ Ĝùďžǉŏƅ Ü(0.92) ĭ ƧĜŏƶďž ƻƒƧơǉƎƅĂ Ü(10.35) Ŏư ƧŪƒ ĭ ƧƙďžĂŏľƅ!ƒ

ƘƒƦ ƭĂƧù5 þĂùŋĂ Ďþ Ƶ Ĭ ľƵ ýþ Ĝďžďž.(0.85) ĭ ƧĜŏƶďž ƻƒƧơǉĜƅĂ Ü(10.20) ĭ þƶƅ!ƒ ƧĜƅƙƤŬĜƅ

Ɨ!Ŭþƅ Ă (.375) "Ƙ" Ɨďžŏp Ƙʒľƅ Ɨ ŏơ Ü ăĂǉŏľ!ƒ Ɨƶďž Ĝŋ ƧĜƅƙƤƒ Ŏ5 (0.05 ≥ α) ƗŏƑĜƬơ Ɨ!Ŭþ

.(.712) Ƙʒľƅ ƗŏƑĜƬơ

$(0.05 \geq \alpha)$

(3)

(.0 99) (17.05 -16.28)

.(.070) (10.49-10.31)

(Jones,

2008)

Gulick et al,) [illegible]

Michael) [illegible] (Kamalakkanna et al, 2013) [illegible] (2007

[illegible] (Lim Joe et al, 2012) [illegible] (et. al, 2006

[illegible] (Raj Kumar, 2013) [illegible] (Singh Bal et al, 2011) [illegible]

Brian) [illegible] براين فوكس [illegible] (Asadi & Arazi, 2012) [illegible]

[illegible] (Fox, 2012

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (Chu ،1999) [illegible]

[illegible] (Wilmore and Costill ،2004) [illegible]

[illegible].

[illegible]

[illegible]

[illegible] (Michael et al, 2006) [illegible]

.(Sheppard, 2006) [illegible] (Matveev & Hare) [illegible]

: [illegible]

[illegible] ($0.05 \geq \alpha$) [illegible] : [illegible] "

[illegible]

". [illegible]

[illegible] (4) [illegible]

[illegible]

[illegible]

(.178) [illegible] (13.84-13.57) [illegible]

[illegible] (Jones, 2008) [illegible]

[illegible]

[illegible]

[illegible] (Gulick et al,2007)

[illegible]

[illegible] (Kamalakkanna, 2010) [illegible]

[illegible]

[illegible] (David Fabricius, 2011) [illegible]

[illegible]

[illegible] (Coetzee et al,2012) [illegible]

8 .

(Brian et al, 2012)

ǇǐǄ ýǂĂ Ü (Wilmore and Costill , 2004) ýŏķƪĂǂĂ ƧĂǆǐŏĂ Ü ǇǐǄ ýǂ ǤǋǊ ǄǤƥ Ŏķ!ƒ

.(Myer 2006) ǇĂƧƤƈ Ă ƧŏǤǆǐĂ

:ƘǁƑķǁƐ ƒ ƥƻǁƑǤ ǊƨǂƴƗǄǁƐ ƛƟƑǂǆǁƐ ǊƪƽƑǆǄ

ƒǈǂƨǓ (α ≤ 0.05) ǌǈǂƨǄ ƾǆƳ ǊǇƟƑƬƟǊǁǕƾ ǀƐƤ ƼǈƥƺƾƼǈǂǕ " :ǊķǁƑķǁƐ ǊǇƬƥƻǁƐ

ƥƑǤƗƾǕƐ Ăǂ ǄƑƗǈǄǆǄǂǁ ǊǇǆƾǤǁƐ ǊƼƑƪƥǁƐ ƥƬǆ ǄǇƨƟǂ Ăǂ ǏƟƑǄǁƐ ăƥƗǄǈǇǂǤǁƐ ƒǇƥƾǂǁƐ

."ăƾƴǤǁƐ

ǂù!ƒƥ ƸĂƧù5 ƥĂùƞ ǄƥƵ (5) ǄƤƧ ýĂƥƞ!ƒ ǇǐǄ ǂŏǇǤĂ!ƒ ǂŏưƧƽ!Ǌ ǂǁǆƶķǆ!ƒ ǈƑǤķǇ!ƒ ƘƧǌƱ

ǏƧķǆĂùŏǁǊ!ƒ ƔŏƧƥùķ!ƒ ǂùƵĂǆƞǆ ǇǤķŏǊŏƧƞķ!ƒ ǇǤķƵĂǆƞǆ!ƒ Ǐƥ! ǂŏƥƶǊ!ƒ ƘǤƪǤŏǀ!ƒ ǇŏǊ ǤƥƑǤƬơǫ

ƔùƛĂ!ƒ ƧǤǊķƤƒĂ ăĂǇŏǁ!ƒ ǂƶǆǤƞ ƧǤǊķƤǫ ǇǐǄ ýǂ! ŎƑǤǆ!ƒ ǏƧķǆĂŏǁǊ!ƒ ƔŏƧƥķ!ƒ ǂƵĂǆƞǆĂ Ǉ ŎưƧǕƒ

ǂŏƑǤƬùơǫ ǂù!Ǖƥ ǁǤǇǈ ǇǂŏǄ! ǂŏơ ǂƤǤƬƧ!ƒ ƩǤŏǀ! Ƭ ýǂƬ ǏǁƵ ǏƧƞ!ƒ ƧǤǊķƤǫĂ ŎƪƒƥƪýǂƬǊ

ƘƺǁǊĂ (16.03-17.05) ăĂǇŏǁ!ƒ ǂƶǆǤƞ ƧǤǊķƤǚ! ŎǊǤƪơ!ƒ ƱƪĂķǆ!ƒ ǇǤǂ ǂŏơ ƘƒƧǤǊķƤǕƒ ǁǁķ!

ýǂƬùǊ ƔùƛĂ!ƒ ƧǤùǊķƤǕ ŎǊǤƪùơ!ƒ ƱƪĂķǆ!ƒ ƴǁǊĂ (.153) ǂ!Ǖƥ ăĂķƪǆǊĂ (1.492) Ƙ ǂǆŏƤ

ƧǤùǊķƤƒ ǤùǆǄ (.552) ǂù!Ǖƥ ăĂķƪǆǊĂ (.606) Ƙ ǂǆŏƤ ƘƺǁǊĂ (13.84 - 13.34) Ŏƪƒƥƪ

ăĂķƪùǆǊĂ (.375) Ƙ ǂǆŏƤ ƘƺǁǊĂ (10.20-10.35) ŎǊǤƪơ!ƒ ƱƪĂķǆ!ƒ ƸǁǊ5 Ƭ ýǂƬǊ ǏƧƞ!ƒ

.(.712) ǂ!Ǖƥ

ŎǊŏƧƥķ!ƒ ǈǆǤǇƧǊ!ƒĂ ŎưƧǕƒ ǏƧķǆĂŏǁǊ!ƒ ŎǊŏƧƥķ!ƒ ǈǆǤǇƧǊǁ! ǇƱ ƸǊƪ Ǥǆ ǇǐǄ ƱơǚǇĂ

ǈƑǤķǇ!ƒ ƘƧǌƱ ǂŏơ ǂŏǂƧơ!ƒ ǂƤǤƬƧ!ƒ ƧƬǇƵ Ǥƒƥƹ ăĂķƪǆ Ŏ5 ǇƪơķƒƧǌƱ ŎƑǤǆ!ƒ ǏƧķǆĂŏǁǊ!ƒ

ƠưƒĂ ǇƪơķăĂķƪǆ ǤķƧǌƱ ǇǤķǀŏƧƱ!ƒ ǇƱĂ ǇǤķŏǊŏƧƥķ!ƒ ǇǤķǀŏƧƱ!ƒ ǇŏǊ ƸĂƧ5 ƥĂƞĂ ǄƥƵ

[illegible]

[illegible]

Kamalakkanna,) [illegible] (Jones, 2008) [illegible]

[illegible] (David Fabricius, 2011) [illegible] . (2010

[illegible] (Coetzee et al,2012)

Gulick et) [illegible]

Lim Joe) [illegible] (Michael et. al, 2006) [illegible] (al,2007

[illegible] (Singh Bal et al, 2011) [illegible] (et al, 2012

(Asadi & Arazi, 2012) [illegible] (Raj Kumar, 2013)

[illegible] (Brian Fox, 2012) [illegible] براين فوكس [illegible]

[illegible].

الفصل الخامس

- الاستنتاجات
- التوصيات

[illegible]

[illegible]

[illegible]

-1 [illegible]

[illegible] (14) [illegible].

-2 [illegible]

[illegible] (14) [illegible].

-3 [illegible]

[illegible]

[illegible] .

[illegible]

-1 [illegible]

[illegible]

[illegible].

-2 [illegible]

[illegible] .

-3 [illegible].

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2- اختبار الوثب بشكل سداسي

الهدف من اختبار: قياس الرشاقة

الأدوات:

أ- أرضية مسطحة غير زلقة مع رسم شكل سداسي منتظم عليها بمسافة 66 سم لكل ضلع من أطراف الشكل.

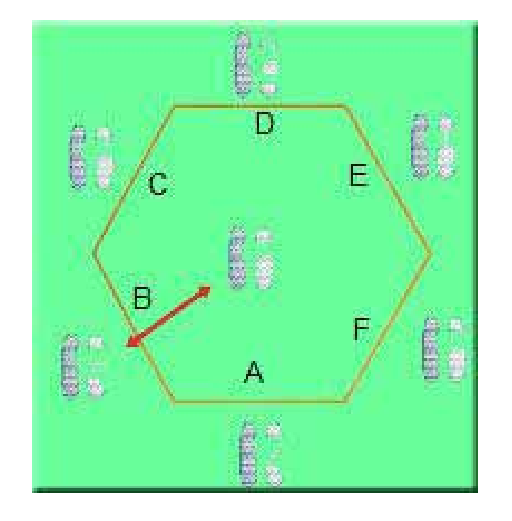
ب- ساعة إيقاف.

طريقة الأداء: يقف المشترك بوسط الشكل السداسي مواجهاً حرف البداية (A) عند سماع إشارة البدء تبدأ ساعة الإيقاف بالعمل ويثب المشترك فوق الخط (B) ثم يعود لمنتصف الشكل السداسي، ويثب مرة أخرى فوق الخط (B) ثم يعود لمنتصف الشكل السّداسي مجّددًا. ويثب فوق الخط (C) ثم يعود لمنتصف الشكل وهكذا حتى يكمل الدورة كاملة.

على المشترك إكمال 3 دورات متتابعة وبعد ذلك يتم إيقاف السّاعة ويتم إعطاء فترة راحة لمدة 5 دقائق، ثم يتم إعادة تطبيق الاختبار مرة ثانية. عند الإنتهاء من إجراء الاختبار للمرة الثانية يتم احتساب متوسط زمن تطبيق الاختبار لكل مشترك، اذا قام المشترك بالوثب باتجاه الجهة الخاطئة يجب إعادة تطبيق الاختبار.

احتساب الدرجات: يتم احتساب الزمن من لحظة انطلاق إشارة البدء بمُرور اللاعب عبر جميع أضلاع الشكل السداسي إلى لحظة مروره عبر الشكل كاملاً للمرة الثالثة وذلك بتقريب الزمن إلى أقرب (0.1) ثانية.

يتم إعطاء اللاعب محاولتين مع فترات راحة بينية خمس دقائق بين المحاولة الأولى والمحاولة الثانية، .يتم تسجل متوسط الزمن المستغرق لتطبيق الاختبار في المحاولتين .(MACKENZIE, B 2002)



يوضح الشكل إختبار الوثب بشكل سداسي

3- اختبار (T) للرشاقة

الهدف من اختبار: قياس الرشاقة

الأدوات:

1. أرضية مسطحة وغير زلقة.
2. (4) أقماع
3. ساعة إيقاف.
4. شريط قياس

طريقة الأداء:

1. عند سماع الإشارة يبدأ حساب الوقت و يركض اللاعب إلى الأمام مسافة (9.15) م أو (10) ياردة ويلمس القمع باليد اليُمنى.
2. يركض اللاعب إلى الجانب بخطوات جانبيّة (انزلاق جانبي) إلى اليسار مسافة (4.6) م أو (5) ياردة ليلمس القمع باليد اليسرى.
3. ير كض اللاعب إلى الجانب الأيمن بخطوات جانبيّة (انزلاق جانبي) إلى اليمين مسافة (9.15) م أو (10) ياردة ويلمس القمع باليد اليمنى.
4. يركض اللاعب مرة أخرى إلى الجانب الأيسر بخطوات جانبيّة مرافة مسافة (4.6) م أو (5) ياردة ليلمس القمع باليد اليسرى.
5. يركض اللاعب إلى الخلف بخطوات خلفية ليمر عن القمع الذي بدأ منه وعندها يتم إيقاف الساعة.

احتساب الدرجات: يُحتسب الزمن من لحظة الانطلاق عند سماع الإشارة حتى إنهاء جميع المراحل والمرور بالقمع الذي انطلق منه اللاعب ويحسب الزمن بالثانية مقرباً إلى أقرب (0.1) ثانية.

يعطى اللاعب محاولتين ويحتسب أفضل محاولة أو أقل زمن مع مراعاة إعطاء فترة راحة (1-2) دقيقة بين المحاولتين. ريمان ومانسك (Reman and Manske,2009).

والشكل يوضح طريقة اداء اختبار (T) للرشاقة



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PLYOMETRIC INTERVENTION PROGRAM

Week 1

Warm-up:

- Jogging for 3 min at 50% pace around field or pool
- Dynamic stretches (high-knee jogging, skipping, bodyweight squats)

Rest between sets: 60 seconds (1:5; work: rest)

Rest between repetitions: 30 seconds

Rest between repetitions for depth jumps: 5-10 seconds

Session 1

Exercise	Intensity	Sets	Reps	Duration	Distance
Ankle hops	Low	2	1		20.5m
Skipping	Low	2	1		20.5m
Power skipping	Low	2	1		20.5m
Tuck jumps	Medium	2	1		20.5m
Repeated countermovement jumps	Medium	3		10s	
Depth jumps (Into landing only)	Low	2	3		

Session 2

Exercise	Intensity	Sets	Reps	Duration	Distance
Ankle hops	Low	2	1		20.5m
Skipping	Low	2	1		20.5m
Power skipping	Low	2	1		20.5m
Tuck jumps	Medium	2	1		20.5m
Repeated countermovement jumps	Medium	3		10s	
Depth jumps (Into landing only)	Low	2	3		

Week 2

Warm-up:

- Jogging for 3 min at 50% pace around field or pool
- Dynamic stretches (high-knee jogging, skipping, bodyweight squats)

Rest between sets: 60 seconds (1:5; work: rest)

Rest between repetitions: 30 seconds

Rest between repetitions for depth jumps: 5-10 seconds

Session 1

Exercise	Intensity	Sets	Reps	Duration	Distance
Ankle hops	Low	3	1		20.5m
Skipping	Low	3	1		20.5m
Power skipping	Low	3	1		20.5m
Tuck jumps	Medium	3	1		20.5m
Repeated countermovement jumps	Medium	3		10s	
Depth jumps (Into landing only)	Low	3	3		

Session 2

Exercise	Intensity	Sets	Reps	Duration	Distance
Ankle hops	Low	3	1		20.5m
Skipping	Low	3	1		20.5m
Power skipping	Low	3	1		20.5m
Tuck jumps	Medium	3	1		20.5m
Repeated countermovement jumps	Medium	3		10s	
Depth jumps (Into landing only)	Low	3	3		

Week 3

Warm-up:

- Jogging for 3 min at 50% pace around field or pool
- Dynamic stretches (high-knee jogging, skipping, bodyweight squats)

Rest between sets: 60 seconds (1:5; work: rest)

Rest between repetitions: 30 seconds

Rest between repetitions for depth jumps: 5-10 seconds

Session 1

Exercise	Intensity	Sets	Reps	Duration	Distance
Single-leg ankle hops	Low	3 (6)	1		20.5m
Side-to-side ankle hops	Low	3	1	15s	
Power skipping	Medium	3	1		20.5m
Tuck jumps	Medium	3	1		20.5m
Repeated long jump	Medium	4		15s	
Depth jumps	Medium	3	3		

Session 2

Exercise	Intensity	Sets	Reps	Duration	Distance
Single-leg ankle hops	Low	3 (6)	1		20.5m
Side-to-side ankle hops	Low	3	1	15s	
Power skipping	Medium	3	1		20.5m
Tuck jumps	Medium	3	1		20.5m
Repeated long jump	Medium	4		15s	
Depth jumps	Medium	3	3		

Week 4

Warm-up:

- Jogging for 3 min at 50% pace around field or pool
- Dynamic stretches (high-knee jogging, skipping, bodyweight squats)

Rest between sets: 60 seconds (1:5; work: rest)

Rest between repetitions: 30 seconds

Rest between repetitions for depth jumps: 5-10 seconds

Session 1

Exercise	Intensity	Sets	Reps	Duration	Distance
Single-leg ankle hops (L/R)	Low	4 (8)	1		20.5m
Side-to-side ankle hops	Low	4	1	15s	
Power skipping	Medium	4	1		20.5m
Tuck jumps	Medium	4	1		20.5m
Repeated long jump	Medium	4		20s	
Depth jumps	Medium	3	3		

Session 2

Exercise	Intensity	Sets	Reps	Duration	Distance
Single-leg ankle hops (L/R)	Low	4 (8)	1		20.5m
Side-to-side ankle hops	Low	4	1	15s	
Power skipping	Medium	4	1		20.5m
Tuck jumps	Medium	4	1		20.5m
Repeated long jump	Medium	4		20s	
Depth jumps	Medium	3	3		

Week 5

Warm-up:

- Jogging for 3 min at 50% pace around field or pool
- Dynamic stretches (high-knee jogging, skipping, bodyweight squats)

Rest between sets: 60 seconds (1:5; work: rest)

Rest between repetitions: 30 seconds

Rest between repetitions for depth jumps: 5-10 seconds

Session 1

Session 2

Exercise	Intensity	Sets	Reps	Duration	Distance
Zigzag hops	Low	4	1		20.5m
Single-leg side-to-side ankle hops(L/R)	Medium	4 (8)	1	10s	
Repeated vertical jump	Medium	4	1		20.5m
Repeated long jumps	Medium	4	1		20.5m
Repeated countermovement jumps	Medium	4		20s	
Depth jumps	Medium	3	3		

Session 2

Exercise	Intensity	Sets	Reps	Duration	Distance
Zigzag hops	Low	4	1		20.5m
Single-leg side-to-side ankle hops(L/R)	Medium	4 (8)	1	10s	
Repeated vertical jump	Medium	4	1		20.5m
Repeated long jumps	Medium	4	1		20.5m
Repeated countermovement jumps	Medium	4		20s	
Depth jumps	Medium	3	3		

Week 6

Warm-up:

- Jogging for 3 min at 50% pace around field or pool
- Dynamic stretches (high-knee jogging, skipping, bodyweight squats)

Rest between sets: 60 seconds (1:5; work: rest)

Rest between repetitions: 30 seconds

Rest between repetitions for depth jumps: 5-10 seconds

Session 1

Exercise	Intensity	Sets	Reps	Duration	Distance
Zigzag hops	Low	5	1		20.5m
Single-leg side-to-side ankle hops(L/R)	Medium	5 (10)	1	10s	
Repeated vertical jump	Medium	5	1		20.5m
Repeated long jumps	Medium	5	1		20.5m
Repeated countermovement jumps	Medium	4		20s	
Depth jumps	Medium	5	3		

Session 2

Exercise	Intensity	Sets	Reps	Duration	Distance
Zigzag hops	Low	5	1		20.5m
Single-leg side-to-side ankle hops(L/R)	Medium	5 (10)	1	10s	
Repeated vertical jump	Medium	5	1		20.5m
Repeated long jumps	Medium	5	1		20.5m
Repeated countermovement jumps	Medium	4		20s	
Depth jumps	Medium	5	3		

Week 7

Warm-up:

- Jogging for 3 min at 50% pace around field or pool
- Dynamic stretches (high-knee jogging, skipping, bodyweight squats)

Rest between sets: 60 seconds (1:5; work: rest)

Rest between repetitions: 30 seconds

Rest between repetitions for depth jumps: 5-10 seconds

Session 1

Exercise	Intensity	Sets	Reps	Duration	Distance
Power skipping	Low	5	1		20.5m
Zigzag hops	Medium	5	1		20.5m
Repeated vertical jump	Medium	5	1		20.5m
Front box jumps	High	5	3		
Repeated vertical jump jumps	Medium	4		30s	
Depth jumps	Medium	5	3		

Session 2

Exercise	Intensity	Sets	Reps	Duration	Distance
Power skipping	Low	5	1		20.5m
Zigzag hops	Medium	5	1		20.5m
Repeated vertical jump	Medium	5	1		20.5m
Front box jumps	High	5	3		
Repeated vertical jump jumps	Medium	4		30s	
Depth jumps	Medium	5	3		

Week 8

Warm-up:

- Jogging for 3 min at 50% pace around field or pool
- Dynamic stretches (high-knee jogging, skipping, bodyweight squats)

Rest between sets: 60 seconds (1:5; work: rest)

Rest between repetitions: 30 seconds

Rest between repetitions for depth jumps: 5-10 seconds

Session 1

Exercise	Intensity	Sets	Reps	Duration	Distance
Zigzag hops	Low	5	1		20.5m
Single-leg side-to-side ankle hops(L/R)	Medium	5 (10)	1	10s	
Repeated vertical jump	Medium	5	1		20.5m
Repeated long jumps	Medium	5	1		20.5m
Repeated countermovement jumps	Medium	4		20s	
Depth jumps	Medium	5	3		

Session 2

Exercise	Intensity	Sets	Reps	Duration	Distance
Zigzag hops	Low	5	1		20.5m
Single-leg side-to-side ankle hops(L/R)	Medium	5 (10)	1	10s	
Repeated vertical jump	Medium	5	1		20.5m
Repeated long jumps	Medium	5	1		20.5m
Repeated countermovement jumps	Medium	4		20s	
Depth jumps	Medium	5	3		

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1- استمارة تسجيل اختبار الوثب بشكل سداسي

الاختبار: الوثب عن بشكل سداسي

الغرض من الاختبار: قياس الرشاقة

الرقم	المحاولة (1)	المحاولة (2)	المحاولة الافضل
1-			
2-			
3-			
4-			
5-			
6-			
7-			
8-			
9-			
10-			

2- استمارة تسجيل احتبار جامعة اللينوى

الاختبار: اللينوى للرشاقة

الغرض من الاختبار: قياس الرشاقة.

الرقم	المحاولة (1)	المحاولة (2)	المحاولة (3)	المحاولة الافضل
1-				
2-				
3-				
4-				
5-				
6-				
7-				
8-				
9-				
10-				

3-استمارة تسجيل اختبار الجري بشكل حرف (T)

الاختبار: الجري بشكل حرف (T).

الغرض من الاختبار :قياس الرشاقة.

الرقم	المحاولة (1)	المحاولة (2)	المحاولة (3)	المحاولة الافضل
1-				
2-				
3-				
4-				
5-				
6-				
7-				
8-				
9-				
10-				

صورة شخصية

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نموذج الفحص الطبي

اسم الطالب: ....

العمر : ....

التاريخ : ....\....\ **2013**

رقم الهاتف : ....

الرجاء الاجابة على الاسئلة التالية بوضع اشارة صح تحت الخيار المناسب "نعم" أو "لأ" :

م	الســـــؤال	نعم	لا
1	هل قال الطبيب في وقت من الاوقات انك تعاني من أمراض القلب ومنعك من المشاركة في الانشطة البدنية ذات شدة الحمل البدني العالية ؟		
2	هل تشعر بآلام في منطقة الصدر عندما تزاول الانشطة الرياضية ؟		
3	خلال الشهر الماضي هل هل شعرت بألم في منطقة الصدر وأنت في حالة راحة ؟		
4	هل تفقد توازنك بسبب دوخة أو هل فقدت الوعي في وقت من الأوقات ؟		
5	هل تعاني من إصابة في المفاصل أو العظام والتي تحس انها قد تسوء نتيجة التغيير في المجهود البدني ؟		
6	هل تعاني من ضغط الدم أو بعض أمراض القلب ؟		
7	هل باستطاعتك التعرف على اعراض أو اسباب قد تمنعك من مزاولة الرياضة ؟		

خاص بالطبيب المختص

<table>
<tr><td colspan="2">الرجاء التكرم بالموافقة على مشاركة الطالب المذكور اعلاه لمزاولة الأننشطة الرياضية وإبداء اي ملاحظات يراها الطبيب مفيدة .</td></tr>
<tr><td colspan="2">ملاحظات الطبيب</td></tr>
<tr><td>لائق</td><td>غير لائق</td></tr>
</table>

توقيع الطبيب

ختم المركز الصحي

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Abstract

Kamhieh, Riyad Majed, "Land and Aquatics Plyometric Training Effect on 14 Years Boys' Agility (A Comparative Study)" Masters Degree, Department of Sport Science, Yarmouk University, 2013

(Supervisor: Dr. Faiyz Abu Areda)

The purpose of this study was to examine the effect of using Land and Aquatics Plyometrics training program to enhance the performance of f Agility among health and active boys 14 years old. Subject was (20) male student were selected for this study. An experimental design was used due to the nature of the study. Subjects were divided into two groups. Experimental group 1 (n=10) were assigned to Land plyometrics training program, and experimental group 2 (n=10) were assigned to Aquatic Plyometric training program. Both groups received the training at the same time, to determine the effectiveness of the training program which been design by David **Fabricius, 2011** and edited by the researcher , pre-test and posttest intervention scores for performance of the Agility Tests, mean, standard deviation, and T-Test, to analyze the data. When the two groups were analyzed, no significant differences were found between the groups with regard to Agility variable. The aquatic-group improved significantly ($p<0.05$) in the T test, Illinois test, the land-group showed significant ($p<0.05$) improvements one test out of three the hexagonal agility test.

The researcher suggest that Aquatics Plyometric Training program can be beneficial for players along with Agility training programs, and he recommends that more emphasis should be put to upon research to enhance Agility performance in general.

Keywords: Plyometric Training, Aqua Plyometric Training, Agility.